

Claim Status

1. (Currently Amended) A brine valve mechanism which controls the supply of brine to a water treatment tank comprising:

a) a conduit in communication with the treatment tank;

b) means for withdrawing brine from a brine reservoir within a brine tank containing brine comprising a passageway in communication with the brine and a passageway in communication with the conduit; and

c) means for supplying water to the brine tank wherein the brine tank includes a brine well in communication with a brine reservoir, the means for supplying water comprising a first nozzle and a second nozzle in communication with ~~the a~~ supply of water, the first nozzle supplying water to the brine well for diluting the brine in the reservoir, the second nozzle supplying water to a salt material disposed over the reservoir for replenishing brine in the brine reservoir, the ratio of a flow of water from the second nozzle to the first nozzle is at about 6:1.

2. (Currently Amended) A brine valve mechanism which controls the supply of brine to a water treatment tank comprising:

a) a first conduit in communication with the treatment tank;

b) means for withdrawing brine from a reservoir in communication with the first conduit wherein the means for withdrawing brine comprises a one way valve, an air check immersed in a volume of brine, and a second conduit connected to the valve and the air check such that there is a fluid passageway with the conditioning water treatment tank, the valve comprising a flexible membrane, a piston and a spring operatively connected wherein ~~a~~ ~~the~~ supply of water causes the flexible membrane to flex and exert a pressure pulse on a volume of liquid in the second conduit whereby the volume of liquid displaces a float from a seat in the air check; and

c) means for supplying water to the brine tank wherein the brine tank includes a brine well in communication with a brine reservoir, the means for

supplying water comprising a first nozzle and a second nozzle in communication with the supply of water, the first nozzle supplying water to the brine well for diluting the brine in the reservoir, the second nozzle supplying water to a salt material disposed over the reservoir for replenishing brine in the reservoir, the ratio of a flow of water from the second nozzle to the first nozzle is at about 6:1.

3 - 13 Cancelled

14. (Currently Amended) The mechanism of claim 1 wherein said means for withdrawing brine from a reservoir is a an apparatus for producing a fluid pulse in a conduit, comprising:

- a) structure defining a chamber slidably supporting a piston;
- b) a biasing element for urging said piston towards a first position;
- c) said piston including at least one piston passage for allowing fluid flow from a first fluid passage to a second fluid passage;
- d) a check valve carried by said piston for controlling fluid flow through said piston passage, such that fluid flow from said first fluid passage to said second fluid passage is permitted by said check valve; and,
- e) said check valve inhibiting fluid flow from said second fluid passage through said piston passage, such that fluid flow out of said second fluid passage exerts a force on said piston causing said piston to move away from its first position and producing a fluid pressure pulse in said first fluid passage.

15. (Previously Presented) The mechanism of claim 14, wherein said first fluid passage communicates with a check valve which is opened in response to said fluid pressure pulse.

16. (Previously Presented) The mechanism of claim 15, wherein said apparatus operates to unseat a ball check valve that controls the communication of brine solution from a reservoir into a brine supply conduit.

17. (Currently Amended) A brine valve mechanism which controls the supply of brine to a water treatment tank comprising:

- a) a conduit in communication with the treatment tank;
- b) a apparatus in communication with the conduit for withdrawing brine from a brine reservoir within a brine tank comprising:
 - i) structure defining a chamber slidably supporting a piston;
 - ii) a biasing element for urging said piston towards a first position;
 - iv) said piston including at least one piston passage for allowing fluid flow from a first fluid passage to a second fluid passage;
 - v) check valve carried by said piston for controlling fluid flow through said piston passage, such that fluid flow from said first fluid passage to said second fluid passage is permitted by said check valve; and,
 - vi) said check valve inhibiting fluid flow from said second fluid passage through said piston passage, such that fluid flow out of said second fluid passage exerts a force on said piston causing said piston to move away from its first position and producing a fluid pressure pulse in said first fluid passage ;
- c) a first nozzle for supplying water to a the brine tank well wherein within the brine tank and wherein the includes a brine well is in communication with a the brine reservoir, and
- d) a second nozzle in communication with the supply of water, wherein the first nozzle supplies water to the brine well for diluting the brine in the reservoir and the second nozzle supplies water to a salt material disposed over the reservoir for replenishing brine in the reservoir, the ratio of a flow of water from the second nozzle to the first nozzle is about 6:1.

18. (Previously Presented) The mechanism of claim 17, wherein said first fluid passage communicates with a check valve which is opened in response to said fluid pressure pulse.

19. (Previously Presented) The mechanism of claim 17, wherein said apparatus operates to unseat a ball check valve that controls the communication of brine solution from a reservoir into a brine supply conduit.